



STATUS REPORT

# Progress and Improvements

DPW BUREAU/OFFICE: Patapsco Wastewater Treatment Plant

Date: 3/10/2023

Parameters	February 2023	Monthly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	6 mg/l	30 mg/l	Yes
Biochemical oxygen demand (BOD)	12 mg/l	30 mg/l	Yes
Total phosphorus (TP)	.20 mg/l	2.0 mg/l	Yes
Ammonia (NH3)	1.4 mg/l	N/A	N/A
Enterococci	4 MPN/100 ml	35 MPN/100 ml	Yes

N/A= Not Applicable; MPN= Most Probable Number

**NOTE: THERE IS A MONTHLY AMMONIA PERMIT LIMIT OF 6.3MG/L DURING THE SUMMER SEASON, MAY 1 - OCTOBER 31, AND NO MONTHLY PERMIT FROM NOVEMBER 1 – APRIL 30.**

Parameters	Annual Limit	Seasonal Limit	February Unofficial Totals	Meeting Requirements
Total Nitrogen (TN)	889,300lbs	333,330lbs	59,130lbs	Yes**

\*\* = Still awaiting one day of data. With the current trends, the plant will meet its parameter goals.

## Maintenance Updates

Repairs to the Gravity Sludge Thickener (GST) #4 continue, and are on track for completion in March 2023. This repair will provide three operational GSTs. The optimal number for average plant flows is two GSTs.

The Primary Settling Tank (PSTs) repair order will provide automation and necessary improvements for scum troughs to prevent Fats Oil and Grease (FOG) from intruding into the effluent process. The contractor has mobilized and beginning work. The scum troughs continue to operate manually, and the scum/FOG is removed from the process and into dumpsters for hauling to the landfill. Patapsco has 6 PSTs total. There are currently four in service with two on standby for redundancy.

Fine screens #5 and 6 have been installed. The one remaining fine screen is to be repaired as part of our preventative maintenance improvements has been picked up for refurbishment. The facility has seven functional screens for plant operations, with four needed for average flows.



**1 Coarse Screens at Patapsco WWTP**

There are currently four of six Oxygen Reactors available for the treatment process. The remaining two oxygen reactors are out for various proactive repairs and maintenance. The optimal number for regular flow is four reactors. DPW hopes to have all six reactors ready for service by the end of the year.

The secondary treatment process has seven of eight secondary clarifiers available. The optimal number for regular flow is five clarifiers. The remaining clarifier is out for proactive repairs.

The Biological Aerated Filters (BAF) has all 22 cells available for operation. The plant needs fourteen cells for design flow.

The DeNitrification Filters remove the Nitrogen from our effluent and are critical to maintaining permit compliance. All 34 DNF filters are fully functional and available to be placed in operation. Twenty-four are required for average flows, which allows for 10 filters for redundancy purposes.

The drying facility operated by our partner, Synagro, has been placed back into operations and continues its biosolids drying process. The dryers produce biosolids used for fertilizer. The fertilizer is one way Patapsco supports DPW's environmental protection mission. Our mission statement states, "We support the health, environment, and economy of our City and region by providing customers with safe drinking water and keeping neighborhoods and waterways clean."



**2 Secondary Clarifier at Patapsco**

Preventive maintenance efforts continue to be the primary focus of the plant operations and maintenance staff.

## Compliance and Safety

The Office of Environmental Regulatory Compliance and Safety (ERCS) participated in site inspections, at Patapsco WWTP and Back River WWTP, with MDE environmental compliance specialists. ERCS provided compliance support in coordinating plant update reports to MDE. ERCS also assisted WWTP personnel: in improving Standard Operating Procedures related to quality control, equipment verification processes, routine monitoring, and sample data reporting to MDE.

ERCS has begun meeting routinely with the WWTP's management and the Program Management Team on health, safety, and facility asset management.

## Training

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The City's Program Management Team, Atkins, is conducting a review and analysis of plant information to assist with establishing the training and certification needs of the staff, in coordination with the City's Training and Development Chief. The goals are to develop a robust apprenticeship training and continuing education program for current staff. Additionally, supplemental support classes for operations staff enhance permanent certification rates.

The B'More WISE cohort continues their training and prepares for their first rotation from Water to Wastewater and vice-versa. The fellows attend two days of intensive in-class learning and three days of on-the-job training each week to help bring them up to speed to be future operations apprentices.

The City's computer-based training continues to be a focus of the Bureau of Water and Wastewater as we enhance our operations at our wastewater facilities. We encourage our employees to complete one 360Water course every two weeks for continuing education.

Maryland Certified Environmental Training (MCET) classes were held at Patapsco for operator certification training on 2/8/2023, 2/15/2023, and 2/22/2023, with 17 attendees in each class. The City is generating a list of participants for June's 4-day short course, a series of classroom trainings to prepare operators for the certification exam.

## Summary

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As we continue, we are confident in a clear path to compliance at the Patapsco Wastewater Treatment Plant. **Monthly parameters have remained under permit limits since September 2022 and are starting in 2023 in compliance with January and February permit requirements.** The Patapsco is an asset to the greater Baltimore Region, and DPW is excited about its path to sustained compliance.